

Jay Mason
Chair

In Lowell Sustainability Council

RECOMMENDATION

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| Date: | December 3, 2020 |
| Subject: | Solar Panels on the Roof of Lowell High School |
| Recommendation: | The Lowell Sustainability Council Recommends the City Explores All Available Options to Fund and Install Solar Panels on the Roof of Lowell High School |

Dear Mayor Leahy and Members of the City Council:

The Lowell Sustainability Council (LSC) recommends that the City explores all available options to fund and install solar panels on the roof of Lowell High School. The LSC wishes to assist in this process. This is a great opportunity for the City to achieve three goals: (1) maximize the financial benefits to the city; (2) reduce the school's carbon footprint; and (3) make renewable energy more accessible to all Lowell residents, including low-income residents who disproportionately experience the negative effects of climate change.

Under State law, the high school project must achieve a minimum of a 10% increase in energy efficiencies above the Massachusetts Energy base code. To help meet this goal, the gymnasium and Freshman Academy will be built "solar ready." This is already required in the project as designed. While this is a non-reimbursable expense, there are some low-cost and no-cost options to fund the project. Furthermore, if the project exceeds the base energy code by 20%, the City will receive two reimbursement points from the State. We estimate that solar panels on the gymnasium and the Freshman Academy would generate significant power: 300 kW. This amount of green energy could help the High School exceed the 20% level — we will include that question in our work.

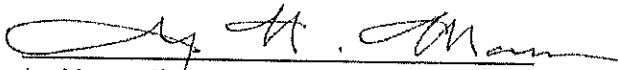
There are two options to achieve the energy efficiency goal:

- A Power Purchase Agreement with a solar vendor: Under this option, there is no up-front investment for the City. Instead, the vendor installs, owns, and operates the solar arrays, then sells the power generated back to the City at a reduced, fixed rate for the duration of the agreement (often 15 to 25 years). In addition to the fixed energy savings there is often a lease payment from the vendor to the City.
- Direct purchase of a solar array, either by the City alone or through a partnership: This option requires significant expense on the front-end, but yields substantial long-term benefits for the City. Unlike a Power Purchase Agreement, the City would own the solar panels and could sell the power produced.

The LSC would like to offer its assistance by exploring and helping present the different investment models to the City Council. In exploring these options, the LSC will focus on: (1) the financial benefits and burdens of each approach; (2) how much energy can be produced by each option; (3) who will have access to the energy produced; and (4) whether an option provides any additional benefits for the City.

With the above in mind, the Lowell Sustainability Council strongly recommends the City pursues solar panels on the roof of Lowell High School. Whichever option the City ultimately chooses, the first step is to ensure that the High School project design maximizes the space and efficiency for an array of solar panels.

Respectfully submitted by:
Lowell Sustainability Council


Jay Mason, Chair

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